766x1b2\_2019 Update 04 Changes from 01 Update Version

Cover Page

* change standard designation from CCSDS 766.1-B-2 to -3
* Change date to May 2020

Document Control Page

* Add information relative to Issue 3 changes

1.4 References

* Changed Reference 6 from LVDS to Camera Link. When we wrote the book originally, LVDS was the Camera Link spec
* Deleted Reference for Dual Link 1.5 Gbs SDI – no longer in practical use
* Added references 39 to 49 to cover additional scientific imaging interfaces, UHD, FUHD, high data rate IP video, video camera synchronization
* Note that all the places in the document that have New Reference beside them are to indicate to Tom that he needs to match that to the new reference I added and make the bracket magic happen there.

3.3.2 Non-Compressed High Definition and Higher Television Signals

* Added multiple references to cover just about every interface known to man (but probably left out a couple Jeremy knows – Apparently not!!)

Added Section 3.3.2.1 on Camera synchronization - Edited it on 5/5/20 and added significant notes at the end of that section.

3.3.3 Compressed Digital Television Signals

* Changed preferred interface from DVB-ASI to IP and changed note about DVB-ASI to show DVB-ASI as a legacy format

3.4.1.1 Overview

* Changed 4K and 8K to UHD and FUHD

3.4.1 et al – Places where we had upper limits of 1280 x 720 are now 1920 x 1080.

3.4.2.1 Deleted 3.4.2.2 statement on spacecraft-to-spacecraft frames should be selected from above, depending upon applications. We have a note in that section saying spacecraft-to-spacecraft frame rates are dependent on mission requirements. I combined that with the other two notes in that section.

3.4.3 Aspect Ratio

* Added UHD and FUHD as video resolutions that are defined as 16:9

3.4.4 Video Compression

* Added H.265

3.4.6

* Added Dynamic Range section

Figure 3-1 Was redrawn and replaced the existing Figure 3-1

Figure 3-2 Was redrawn and replaced the existing Figure 3-2

Section 3.6 was heavily reworked. Most of what’s in Update 01 is in 04

Footnote in the title of 3.6.2 was deleted

3.7.2.2 Discussion – CFDP

* Deleted 4 classes and simplified to 2 classes.

3.8 Distribution of Video Data

* Added 3.8.1 -3
* Deleted 3.8.2, .3 & .4

Annex A

* Multiple changes to the Pics Performa to show addition of new image standards and compression formats.

Annex C – Deleted. No longer needed as we have a green book and a pending red book covering all this

Annexes D & E will be changed to C & D

Annex D (or, the Annex formerly known as E) has had multiple new abbreviations added